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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,147	01/11/2002	Hisao Chikano	217692US3	5813

22850 7590 03/04/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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PHAM, HAI CHI

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/042,147

Applicant(s)

CHIKANO, HISAO

Examiner

Hai C Pham

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4,6-13 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-13 and 15-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01/27/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-2, 6, 8-11, 15, 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Watanabe (JP 2001-13856).

Watanabe discloses an image forming device having a writing device (image formation section 2) configured to write and form an image on a surface of an image bearing member (photoconductor drum 10), a developing device (11) configured to develop the image formed on the surface of the image bearing member, an upper duct (air duct 38a) provided on and a lower duct (air duct 38b) provided beneath a housing (lower portion of the main housing 3 delimited by the upper wall 3A) of the writing device

to form an outside-air-flowing path, a single air intake fan (air-supply fan 37) configured to take outside-air into the upper duct and the lower duct.

Watanabe further teaches:

- an opening (outlet 42) being provided to the lower duct such that the opening is covered by the housing,
- a fan (ventilating fans 4, 8, 18) being provided to an air discharge outlet of the lower duct,
- outside air that flows through at least one of the upper duct and the lower duct being used to cool components other than the writing device (see English Translation, paragraphs [0013] and [0016]),
- outside air that flows through at least one of the upper duct and the lower duct being used to remove ozone produced in the image forming apparatus (see English Translation, paragraph [0013]).

4. Alternatively, claims 1-2, 6, 8, 10-11, 15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Ichikawa (JP 04-337750).

Ichikawa discloses a cooling device for an image forming apparatus, which includes a writing device (Fig. 5) configured to write and form an image on a surface of an image bearing member (photoconductor drum 2), a developing device (10) configured to develop the image formed on the surface of the image bearing member, an upper duct (upper duct 21) provided on and a lower duct (lower duct 22) provided beneath a housing of the writing device to form an outside-air-flowing path, a single air

intake fan (air-supply fan 24) configured to take outside-air into the upper duct and the lower duct (Fig. 4).

Ichikawa further teaches:

- an opening (outlet 42) being provided to the lower duct such that the opening is covered by the housing,
- a fan (ventilating fan 28) being provided to an air discharge outlet of the lower duct (Fig. 4),
- outside air that flows through at least one of the upper duct and the lower duct being used to cool components other than the writing device (cooling the fixing device 15).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-4, 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Iino et al. (U.S. 5,185,629).

Watanabe discloses all the basic limitations of the claimed invention except for the upper duct being provided in and covered by the scanner frame.

Iino et al. discloses an image forming apparatus comprising a writing device (Fig. 1) configured to write and form an image on a surface of an image bearing member

intake fan (air-supply fan 24) configured to take outside-air into the upper duct and the lower duct (Fig. 4).

Ichikawa further teaches:

- an opening (outlet 42) being provided to the lower duct such that the opening is covered by the housing,
- a fan (ventilating fan 28) being provided to an air discharge outlet of the lower duct (Fig. 4),
- outside air that flows through at least one of the upper duct and the lower duct being used to cool components other than the writing device (cooling the fixing device 15).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-4, 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Iino et al. (U.S. 5,185,629).

Watanabe discloses all the basic limitations of the claimed invention except for the upper duct being provided in and covered by the scanner frame.

Iino et al. discloses an image forming apparatus comprising a writing device (Fig. 1) configured to write and form an image on a surface of an image bearing member

(photoreceptor 11), a developer (14), an upper duct provided on and a lower duct provided beneath a housing of the writing device (lower section of the housing 10 enclosing the writing device formed around the photoreceptor 11). lino et al. further teaches the open upper side of the housing being covered by a scanner frame of an original document reading device (upper portion of the housing 10 containing the exposure lamp for reading an original document through a platen glass 100), and wherein the upper duct is provided in the scanner frame (upper portion of the housing 10 in Figs.1 and 5), and an opening (25b, Figs. 1 and 4) being provided to the upper duct and being cover by the scanner frame (frame formed by the upper portion of the housing 10).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Watanabe to have the upper duct be provided in the scanner frame as taught by lino et al. The motivation for doing so would have been to take the advantage of the provided cooling air to cool the document reading device located above the writing device.

7. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Kubota (U.S. 5,510,827).

Watanabe discloses all the basic limitations of the claimed invention except for the scanning optical components of the writing device being formed of a plastic.

However, it is well known in the printing art that the scanning lenses are generally made of a plastic material that allows easy formation of a special lens surface

shape, is easy to manufacture, and is manufactured at low costs. Kubota et al, for example, discloses a laser beam printer including plastic imaging lens (29) as well as a cooling system arranged in the optical box.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the plastic scanning optical component as taught by Kubota et al. in the device of Watanabe. The motivation for the combination would have been to provide a low cost scanning lens with a desired surface shape.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 1-4, 6-13, and 15-18 have been considered but are moot in view of the new grounds of rejection presented in this Office action.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on T-F (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (751) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Art Unit: 2861

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HAI PHAM  
PRIMARY EXAMINER

February 18, 2004



LIST OF RELATED CASES

	<u>Docket Number</u>	<u>Serial or Patent Number</u>	<u>Filing or Issue Date</u>	<u>Inventor/ Applicant</u>	
N/A	217692US3*	10/042,147	01/11/02	CHIKANO	
HP (**)	244412US2	10/692,792	10/27/03	KIZAKI et al.	Pending
HP (**)	244515US2	10/694,062	10/28/03	KIZAKI et al.	Pending

(\*\*) Not to be published as Cited References.

Hai Chi Pham

2/18/04

\*Present Application; listed for information

GJM/akh

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